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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,987	11/14/2003	Youichi Tei	32307-192751	7491
26694	7590	08/16/2007		
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			EXAMINER PEZZUTO, HELEN LEE	
			ART UNIT 1713	PAPER NUMBER
			MAIL DATE 08/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/706,987	TEI ET AL.	
	Examiner	Art Unit	
	Helen L. Pezzuto	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 7-12 is/are rejected.
- 7) ☒ Claim(s) 3 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/14/07</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

Applicant's amendment to claim 4 filed in the reply on 6/14/07 is acknowledged. Currently, claims 1-12 are under consideration in this application.

Election/Restrictions

1. This application contains claims 13-14 drawn to an invention nonelected **without** traverse in the reply filed on 1/19/06. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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3. Claims 1-2, 4-5, 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baucom et al. (J. Macromol. Sci.-CHEM., A8(7), p. 1205-1238 (1974)) for the reasons of record.

The journal article to Baucom et al. is directed to the study of cyclopolymerization of unsymmetrical 1,6-heptadienes via free radical mechanism. Among those nonconjugated dienes studied include 2-phenylallyl ether and 2-phenylallyl methallyl ether, which fall within the scope of the instant formula (II) with R equal to phenyl and methyl, respectively (see pages 1215-1216, formulas XXII and XXIV). Accordingly, it would have been obvious to one having ordinary skill in the art to employ any of the unsymmetrical 1,6-heptadienes studied, including 2-phenylallyl ether and 2-phenylallyl methallyl ether to form the corresponding polymers via free radical cyclopolymerization, motivated by the reasonable expectation of success as taught. The properties such as molecular weight, degree of cyclization, Tg, thermal decomposition point and moisture content are considered as inherent in the prior art, because identical starting monomers are utilized in the free radical cyclopolymerization, and said cyclopolymerization is taught to be the predominated mode of radical initiated

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propagation. The burden is placed upon the applicant to provide clear evidence that prior art cyclopolymerized products do not necessarily or inherently possess properties of the claimed product, where claimed and prior art products are identical or substantially identical, and are produced by identical or substantially identical processes. In any event, once the suggestion of forming polymerized product comprising the recited units are provided, it would have been obvious to one having ordinary skill in art to determine the optimum molecular weight of the resultant polymer product commensurate with their final utilities. Regarding the new product-by-process limitation recited in amended claim 4. Firstly, the examiner is of the position that the recited process conditions are conventional and readily envisaged by one having ordinary skill in the polymer art. Secondly, it is well settled that if the product in a product-by-process claim is the same as or obvious from a product of the prior art. The claim is unpatentable even though the prior art was made by a different process. Furthermore, in the instant case, prior art is silent in reference to the polymerization temperature, and thus, is generic to applicants.

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Response to Arguments

4. Applicant's amendment and arguments filed 6/14/07 have been fully considered but they are not persuasive. The crux of applicant's argument lies in the lack of cyclopolymerization conditions provided in the reference and the unpredictability of the degree of cyclization in 1,6-dienes. The examiner disagrees as prior art disclose cyclopolymerization would be predicted to be the predominant mode of free radical propagation (page 1211). Furthermore, prior art is not limited to the conditions reported in a different article as asserted. The examiner remains of the position that the recited polymerization temperature of 60-140°C is considered conventional, absent showing of unexpected results or criticality demonstrated for the temperature range. Accordingly, the examiner's position is maintained.

Allowable Subject Matter

5. Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art of record do not fairly suggest an embodiment of R is hydrogen. One having ordinary skill in the art would not be motivated to substitute a hydrogen atom for a hydrocarbon group (e.g. methyl, phenyl, etc.)

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

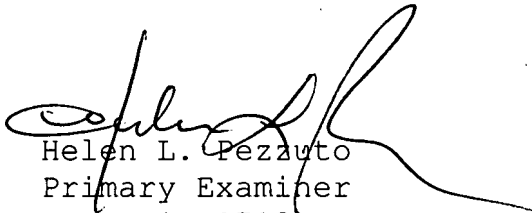
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Helen L. Pezzuto
Primary Examiner
Art Unit 1713

hlp